

I cannot forecast how the proposal will strike experienced botanists ; but it appears to me to be at least worthy of their consideration.

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REVIEWS

Campbell's Mosses and Ferns *

The second edition of Professor Campbell's work on the mosses and ferns will, we are sure, be welcomed by botanists, since the earlier book has been for some time out of print. The value of this book has by no means been small, and its extension to over a hundred pages beyond the limits of the original production, together with the changes made necessary by recent advances in our knowledge, will make it still more useful. Typographically, the new edition is not up to the standard of the first. Cuts which appeared clean-cut before are now blurred, a result no doubt partly due to the damage done to the blocks during storage, and partly to inferior printing.

Among the more noticeable changes in the descriptive part of the work we note that the author adopts the view that the Anthocerotae are coördinate in rank with the Hepaticae and Musci, and that the treatment of this interesting segregate is fuller. The practical limitations of book-making have prevented excursions into detail which, however desirable, would easily have doubled the volume in size. Nevertheless, the author has deemed it well to deal somewhat fully with the maturer phases of the sporophytic generation in the more highly organized groups with which he deals, so far as the scope of his task would permit. We are of the opinion that in many instances he has been led into retailing very well-known or easily attainable information, accessible in many reference books. To this slight extent the descriptions smack of compilation without sufficient critical knowledge of the more obvious points of structure,

* Campbell, D. H. *The Structure and Development of the Mosses and Ferns (Archegoniatae)*. 8vo. 1-657. f. 1-322. New York, The Macmillan Company. 1905. Price, \$4.50.

points which, though readily observable, cannot be said to be the less important. The reviewer may speak only of those matters of which he claims to have some personal knowledge and would cite the instance on pages 493-4 where *Lycopodium volubile* is said to have but four rows of leaves in common with *L. complanatum*. This is an error, but one which is made also in the "Pflanzenfamilien" of Engler and Prantl. So also the statement that in some species the leaves are of two kinds, that is, dimorphous. As a matter of fact, the leaves on the foliage shoots of *L. alpinum* are of three kinds, those on the dorsal and ventral surfaces being markedly different from each other and also from the lateral ones. Those among us who chiefly disregard matters lying without the range of microscopic vision would complain rather loudly were similar misapprehension of the structure and variety of, say, archegonia, to obtain, but it is difficult for some minds at least to see that error attaching to the observation of, humanly speaking, large things is any less to be shunned.

There are welcome additions to the older book in the form of a discussion of alternations of generations, and a brief but suggestive chapter on fossil archegoniates. In the former we are glad to notice that there is an indication of a tendency to seek for physiological explanations of the remarkable facts of alternation of generations — this in the last few paragraphs.

The book, we may say in closing, is the product of much study and betokens a dashing vigor of mind which attains the large ends in view, and it should continue to be an important stimulus to a better knowledge of the forms which botanists in this country know rather too little about.

F. E. LLOYD.

Farlow's Bibliographical Index of North American Fungi*

The magnitude of the work begun by Professor Farlow under the above title is apparent from the fact that this first part, consisting of over three hundred pages, covers only the genera anterior to *Badhamia* in the alphabetical sequence. In the inter-

* Farlow, W. G. Bibliographical Index of North American Fungi. Vol. 1. Part 1. Carnegie Institution of Washington, Publication No. 8. 1905. 8vo, i-xxxv + 1-312.